

GPR119 (K-16): sc-48195

BACKGROUND

G protein-coupled receptors (GPRs) are a protein family of transmembrane receptors that transmit an extracellular signal (ligand binding) into an intracellular signal (G protein activation). GPR signaling is an evolutionarily ancient mechanism used by all eukaryotes to sense environmental stimuli and mediate cell-cell communication. All of the receptors have seven membrane-spanning domains and the extracellular parts of the receptor can be glycosylated. These extracellular loops also contain two highly conserved cysteine residues which create disulfide bonds to stabilize the receptor structure. GPR119 is a 335 amino acid protein that is mainly expressed in the pancreas. It is an endogenous receptor for lysophosphatidylcholine (LPC), which is a lipid mediator involved in insulin secretion from pancreatic β cells. GPR119 may participate in this insulin secretion, suggesting that it may be potential target for new anti-diabetic drugs.

REFERENCES

1. Two new fluoroquinolones. 1992. *Med. Lett. Drugs Ther.* 34: 58-60.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300513. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Takeda, S., Kadowaki, S., Haga, T., Takaesu, H. and Mitaku, S. 2002. Identification of G protein-coupled receptor genes from the human genome sequence. *FEBS Lett.* 520: 97-101.
4. Fredriksson, R., Höglund, P.J., Gloriam, D.E., Lagerström, M.C. and Schiöth, H.B. 2003. Seven evolutionarily lacking close relatives. *FEBS Lett.* 554: 381-388.
5. Soga, T., Ohishi, T., Matsui, T., Saito, T., Matsumoto, M., Takasaki, J., Matsumoto, S., Kamohara, M., Hiyama, H., Yoshida, S., Momose, K., Ueda, Y., Matsushime, H., Kobori, M. and Furuichi, K. 2004. Lysophosphatidylcholine enhances glucose-dependent insulin secretion via an orphan G protein-coupled receptor. *Biochem. Biophys. Res. Commun.* 326: 744-751.

CHROMOSOMAL LOCATION

Genetic locus: GPR119 (human) mapping to Xq25; Gpr119 (mouse) mapping to X A4.

SOURCE

GPR119 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of GPR119 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48195 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GPR119 (K-16) is recommended for detection of GPR119 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GPR119 siRNA (h): sc-60733, GPR119 siRNA (m): sc-60734, GPR119 shRNA Plasmid (h): sc-60733-SH, GPR119 shRNA Plasmid (m): sc-60734-SH, GPR119 shRNA (h) Lentiviral Particles: sc-60733-V and GPR119 shRNA (m) Lentiviral Particles: sc-60734-V.

Molecular Weight of GPR119: 37 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Shiratsuchi, A., et al. 2009. Inhibitory effect of N-palmitoylphosphatidylethanolamine on macrophage phagocytosis through inhibition of Rac1 and Cdc42. *J. Biochem.* 145: 43-50.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.